



International Application No ·PCT/FR 03/03863

A. CLASSUFICATION OF SUBJECT MAYTER
IPC 7 G11C11/16 H01L29/66

According to Infernational Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (obsertication system followed by desettation symbols) IPC 7 G11C H01L

Documentation searched other than infilmum documentation to the extent that such documents are included in the traits searched

Electronic dutia base consulted during the intermittional search (name of data base and, where practical, scarch terms used)

EPO-Internal, WPI Data, PAJ, IBM-TDB, COMPENDEX, INSPEC

Category *	Curpon of document, with indication, where appropriate, of the relevant passages	Relevant to daim No.
X	US 5 962 905 A (KAMIGUCHI YUZO ET AL) 5 October 1999 (1999-10-05) cited in the application figure 5 column 5, line 45 - column 6, line 5	1,2,7
A	E.I. RASHBA: "Theory of electrical spin injection: tunnel contacts as a solution of the conductivity mismatch problem" PHYSICAL REVIEW B, vol. 62, no. 24, 15 December 2000 (2000-12-15), - 15 December 2000 (2000-12-15) pages 267-270, XP002253319 USA page 269, column 1, paragraph 3 - page 270, column 1, paragraph 1	3~5

Purifier documents are listed in the continuation of box C.	X Potent family members are listed in annex.	
"Special categorius of cited ducumants: "A" document dutining the general state of the ad which is not considered to be of particular relevance. "E" earlier document but published on or after the international filing date. "L" document which may throw doubts on priority dialings) or which is coled to establish the publication date of enother diation or other injectual reason (as specified). "O" document internay to an oral disclosure, use, exhibition or other means. "P" document published prior to the international filing date but later than the priority date claimed.	invention invention cannot be considered novel or cannot be considered to cannot be considered to taken alone invention or cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone taken of enother or cannot be considered to involve an inventive attack when the cannot be considered to involve an inventive attack when the cannot be considered to involve an inventive attack when the cannot be considered to involve an inventive attack when the cannot be considered to involve an inventive attack when the cannot be considered inventive attack when the cannot be considered with one or mate other such document is combined with one or mate other such document.	
Date of the actual competition of the International search 6 July 2004	Date of malking of the international search report 19/07/2004	
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentiasn 2 NL - 2200 HV Riswijk Tet. (+31-70) 340-2040, Tx. 31 661 epo ni, Fax (-811-70) 340-3018	Authorized officer Havard, C	

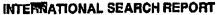




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		PCT/FR 03/03863			
Category •	etion) DOCUMENTE CONSIDERED TO BE RELEVANT Catation of document, with indication, where appropriate, of the relevant passages	Relevant to stalm No.			
A	V.I. SAFAROV, V.F. MOTSNYI, J. DE BOECK, J. DAS, W. VAN ROY, G. BORGHS AND E. GOOVAERTS: "Electrical spin injection in a ferromagnet/tunnel barrier/semiconductor heterostructure" APPLIED PHYSICS LETTERS, vol. 81, no. 2, 8 July 2002 (2002-07-08), - 8 July 2002 (2002-07-08) pages 265-267, XP002253320 USA figure 1				
	US 2001/031547 A1 (OHNO HIDEO ET AL) 18 October 2001 (2001-10-18) figure 5 paragraph '0027!	1-7			
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information on patent family members

International Application No PCT/FR 03/03863

Patent document cited in search report		Publication data	Patent family member(s)		Publication date	
US 5962905	Α,	05-10-1999	JP	10150232	A	02-06-1998
US 2001031547	A1	18-10-2001	JP JP	3284239 2001250998 /		20-05-2002 14-09-2001

Form PCTABA/210 (patent lamily ennex) (Junuary 2004)